

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 3. (Cancelled)

4. (Cancelled)

5. – 22. (Cancelled)

23. (Previously Presented) The gas discharge detector of Claim 27 wherein the gas discharge tube is no more than 10 millimeters in length.

24. (Previously Presented) The gas discharge detector of Claim 23 wherein the gas discharge tube has a diameter on the order of 1 mm.

25. (Cancelled)

26. (Cancelled)

27. (Currently Amended) A gas detector comprising:

a discharge tube made of sapphire in which gas is carried for conversion to a plasma therein;

an enclosed passageway surrounding the discharge tube thorough which cooling air moves, such contained cooling air coming in contact with the outer surface of the discharge tube before the outlet of the discharge tube; and

~~apparatus~~ a radial line resonator having a chamber without an outlet encircling the discharge tube and the enclosed passageway and being located before the outlet of the discharge tube, such resonator when energized ~~apparatus~~ subjecting the discharge tube and enclosed passageway ~~to~~ with sufficient amounts of radio frequency or microwave energy to generate plasma in the discharge tube from the gas, such radio frequency or microwave energy not effecting the cooling air.

28. (Currently Amended) The gas detector of Claim 27 wherein the radial line resonator ~~apparatus encircling the discharge tube and the enclosed passageway~~ subjects the discharge tube and enclosed passageway ~~to~~ with sufficient amounts of microwave energy to generate plasma in the discharge tube from the gas, such microwave energy not effecting the cooling air.

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Amendments to the Drawings:

No amendments to the Drawings are requested herein.